

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A data transfer controlling method in a radio system that transmits and receives data in an acknowledgement mode, the method comprising:

receiving data units having serial numbers lying in a range of a receiving window,
wherein the data units correspond to an initial window size;

setting window size control information based on a state of a receiving buffer that corresponds to the receiving window;

transmitting the set window size control information from a receiver to a transmitter ~~based on a state of a receiving buffer that corresponds to the receiving window;~~ and
varying a transmitting window size of the transmitter according to the transmitted window size control information,

~~wherein the window size control information includes window size downward setting information if a receiving buffer is in an overflow and a downward window size is 1, wherein the window size control information includes window size upward setting information if a receiving buffer is not in an overflow and an upward setting level is up to an upper level, and the window size control information is transmitted simultaneously with acknowledgment information~~
setting the window size control information comprises:

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checking whether data units more than a predetermined value remain in the receiving buffer,

when data units more than the predetermined value do not remain in the receiving buffer, setting a window size downward setting information as the window size control information,

receiving data units corresponding to the downward set window size according to the window size downward setting information,

checking whether a predetermined margin for receiving the data units exist in the receiving buffer,

when the predetermined margin does not exist in the receiving buffer, setting a window size maintaining information as the window size control information, and

when the predetermined margin exists in the receiving buffer, setting a window size upward setting information as the window size control information.

2. (Original) The method of claim 1, wherein the transmitter is a network and the receiver is a terminal.

3. (Previously Presented) The method of claim 1, wherein the window size control information is contained in status information to be transmitted.

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4. (Original) The method of claim 1, wherein the window size control information is a window size super-field (SUFI).

5. (Previously Presented) The method of claim 3, wherein the status information includes an acknowledge (ACK) super-field (SUFI).

6. (Previously Presented) The method of claim 1, wherein the receiver adjusts the receiving window size to be the same as the transmitting window size.

7-10. (Canceled)

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11. (Currently Amended) A data transfer controlling method in a radio system that controls a flow of a radio link and includes an entity operated in an acknowledgement mode, wherein window size update information is transmitted from a receiving entity to a transmitting entity based on a processing speed by the receiving entity of data units stored in a receiving buffer,

wherein acknowledgment information is transmitted simultaneously with the window size update information, the acknowledgment information controlling transmission of additional data units from the transmitting entity to the receiving entity, transmission of the additional data units controlled based on the window size update information, and

~~wherein the window size update information includes window size downward setting information if a receiving buffer is in an overflow and a downward window size is a 1, and wherein the window size update information includes window size upward setting information if a receiving buffer is not in an overflow and an upward setting level is up to an upper level~~control information is set to one of window size upward setting information, window size maintaining information and window size downward setting information based on a state of a receiving buffer that corresponds to the receiving window.

12. (Previously Presented) The method of claim 11, wherein the entity is a radio link control (RLC) entity.

13. (Original) The method of claim 11, wherein the receiving entity adjusts a receiving window size to be the same as a transmitting window size.

14. (Original) The method of claim 11, wherein the window size update information is transmitted through status information.

15. (Previously Presented) The method of claim 11, wherein the window size update information is included in a window size super-field (SUFI).

16. (Previously Presented) The method of claim 14, wherein the status information includes an acknowledge (ACK) super-field (SUFI).

17. (Canceled)

18. (Currently Amended) The method of claim ~~[[17]]~~16, wherein the receiving entity adjusts the window size to be downward set when data more than a certain level remains in the receiving buffer.

19. (Original) The method of claim 18, wherein the downward set window size is 1.

20. (Currently Amended) The method of claim ~~[[17]]~~16, wherein the receiving entity adjusts the window size to be upward set when data more than a certain level does not remain in the receiving buffer.

21. (Original) The method of claim 20, wherein the upward setting level is up to an upper limit.

22. (Currently Amended) A data transfer controlling method in a radio data transfer of a mobile communication system, the method comprising:

receiving one or more protocol data units (PDUs) from a transmitting radio link control (RLC) entity;

checking a state of a receiving buffer for storing the one or more PDUs;

transmitting window size control information to the transmitting RLC according to a state of the receiving buffer, the window size control information to vary a transmitting window size of the transmitting RLC entity for transmitting additional PDUs to be stored in the receiving buffer, wherein acknowledgment information is transmitted simultaneously with the window size control information, the acknowledgment information controlling transmission of said additional PDUs based on the varied transmitting window size,

wherein the window size control information ~~includes window size downward setting information if a receiving buffer is in an overflow and a downward window size is 1,~~
~~wherein the window size control information includes window size upward setting information~~

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~~if a receiving buffer is not in an overflow and an upward setting level is up to an upper level is~~
set to one of window size upward setting information, window size maintaining information and
window size downward setting information based on a state of a receiving buffer that
corresponds to the receiving window.

23. (Previously Presented) The method of claim 22, wherein a receiving RLC entity adjusts a receiving window size to be the same as the transmitting window size.

24-25. (Canceled)

26. (Previously Presented) The method of claim 22, wherein the window size control information is a window size super-field (SUFI).

27. (Original) The method of claim 22, wherein the window size control information is transmitted through status information.

28. (Previously Presented) The method of claim 27, wherein the status information is an acknowledge (ACK) signal.

29. (Previously Presented) The method of claim 28, wherein the ACK signal includes an ACK super-field (SUFI).

30-31. (Canceled)

32. (Currently Amended) The method of claim 1, wherein [[the]] acknowledgement information is included in a first super-field and the window size control information is included in a second super-field, and the first and second super-fields are transmitted simultaneously within a status protocol data unit (PDU) from the receiver to the transmitter.

33. (Previously Presented) The method of claim 1, wherein the transmitting window is varied to a size that allows previously received data stored in the receiving buffer to be arranged in sequence without said additional data units being lost in the receiving buffer.

34. (Previously Presented) The method of claim 1, further comprising:
adjusting a window size of the receiving buffer based on the window size control information.

35. (Previously Presented) The method of claim 34, wherein the varied window size of the receiving buffer is adjusted to be equal the transmitting window size varied based on the window size control information.

36-38. (Canceled)